Seismic Zones in India

2325. SHRI RAGHAVJI:
PROF. VIJAY KUMAR MALHOTRA:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) what are the seismic zones in Indi:

(b) whether any corrective/preventive measures have been taken to lessen the gravity of earthquakes; if so, the detail thereof;

(c) whether any seisms have been predicted for Khandwa region of M.P, and

(d) if so, the details thereof togetherwith the steps taken in the matter?

THE MINISTER OF HUMAN RESOURCE DEVELOPMENT AND MINISTER OF SCIENCE AND TECHNOLOGY (DR. MURLI MANOHAR JOSHI): (a) The country has been divided into five seismic zones by Bureau of Indian Standards based on the inputs from a number of agencies. Zone V is the most seismically active region while zone I is the least. Broadly, the zone-V comprises entire North-Eastern India, parts of Jammu & Kashmir, Himachal Pradesh, West Uttar Pradesh, Rann of Kutch, North Bihar and Andaman Nicobar Islands. Zone-IV covers remaining parts of Jammu & Kashmir, Bihar and Himachal Pradesh, Union Territory of Delhi, Northern parts of Uttar Pradesh, Sikkim, parts of West Bengal, Rajasthan & Gujarat and small portion of Maharashtra near west coast. Zone III comprises of Kerala, Goa, remaining parts of Punjab, Uttar Pradesh and West Bengal, parts of Maharashtra and Madhya Pradesh. The remaining parts of the country fall in zones I &II,

(b) The zoning map depucts the intensity or the peak ground acceleration with which an area is broadly associated. Based on these estimates, the Bureau of Indian Standards has publish guidelines/ manuals for design of earthquake resistant structures for different zones.

(c) and (d) No,. Sir. There is no scientific technique anywhere in the world to forecast the occurrence of earthquakes with reasonable degree of accuracy, with regard to space, time and magnitude.

12.00 NOON

PAPERS LAID ON THE TABLE

I. Notifications of the Ministry of Food and Consumer Affairs.

II. Reports and Accounts (1997-98) of various fertiliser corporations and com-oanies and related papers.

THE MINISTER OF CHEMICALS AND FERTILISERS AND MINISTER OF FOOD AND CONSUMERS AFFAIRS (SHRI SURJIT SINGH BARNALA): Sir, I lay on the Table:—

I. (i)A copy each (in English and Hindi) of the following Notifia-tions of the Ministry of Food and Consumer Affairs (Department of Sugar and Edible Oils), under sub-section (6) of Section 3 of the Essential Commodities Act, 1955:— (i) G.S.R. 584(E), dated September 17, 1998, publishing the Edible Oils Packaging (Regulation) Order, 1998. (ii) G.S.R. 710(E), dated November 30, 1998, publishing the Edible Oils Packaging (Regulation) (First Amendment) Order, 1998. [Placed in Library *See* No. LT-1855/98]

(ii) A copy (in English and Hindi) of the Ministry of Food and Consumer Affairs (Department of Food and Civil Supplies) Notification No. EP. 16(2)/98, dated the 15th October, 1998 publishing the Food Corporation of India (Staff) (2nd Amendment) Regulation, 1998, under sub-section (5) of Section 45 of the Food Corporation Act, 1964. [Placed in Library *See* No. LT-2390/98